

# **EXHIBIT "C"**

**JOSEPH E. MYERS  
INVESTIGATIONS**

**FIRE AND ARSON CONSULTANTS**

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**FIRE SCENE EXAMINATIONS**

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**ASSIGNMENT**

CASE #: 12-00-000A

DATE: April 18, 2012

Type of Investigation: FIRE

Person giving authorization: Steve McKean

INSURANCE CARRIER: Nationwide

Policy#: HO37-B  
Claim#: 5837HP010364

INSURED: Steve McKean

LOCATION OF LOSS: 803 Raymondskill Road  
Milford, Pennsylvania

DATE OF LOSS: September 22, 2011

Type: (X) Structure ( ) Contents Only ( ) Accessory ( ) Rental ( ) Explosion  
(X) Residential ( ) Multi ( ) Commercial ( ) Vehicle ( ) Exposure ( ) Liability

CONTACT: Steve McKean

Phone: 845-239-1630

DATE OF SCENE EXAMINATION: Walk thru exam: April 18, 2012, Joint exam:  
November 2, 2012 with Investigator Thomas Jones & others; Joint exam:  
December 10, 2012 with engineers to examine light fixture.

LOCAL INVESTIGATOR/AGENCY: Pennsylvania State Police: Trp. Russ Andres

PERSON(S) CONDUCTING EXAMINATION: Joseph E. Myers (845) 386-3339

TO: Sherman, Silverstein, Kohl, Rose & Podolsky, P.A.  
East Gate Corporate Center  
Harper Drive, Suite 200  
Moorestown, New Jersey 08057  
Jeffrey P. Resnick

FROM: Joseph E. Myers  
P. O. Box 861  
Otisville, NY 10963-0861

DATE: February 8, 2013

SUBJECT: Fire Investigation

CLIENT: Steve McKean

LOCATION OF LOSS: 803 Raymondskill Road  
Milford, New York

DATE OF LOSS: September 22, 2011

EXHIBITS: Engineers Report from Daryl Ebersole P.E.  
Photos Taken By Joseph E. Myers Investigations  
Photos Taken By Thomas Jones  
Copy of Floor Plan Provided by Stephen McKean  
Attendance Sheet, Joint Exam November 2, 2012  
Business Cards from Joint Exam December 10, 2012  
Copy of ASTM E 1188-11 Standard Practice For Collection  
And Preservation of Information & Physical Evidence By  
A Technical Investigator

## **FIRE INVESTIGATION SUMMARY**

### **PURPOSE OF THE INVESTIGATION**

The purpose of conducting this investigation was to analyze the fire incident and render an opinion as to the cause of such incident. During the course of this investigation this Investigator has utilized a systems approach employing the scientific method as recommended by National Fire Protection Association 921, 2011 Edition, Guide for Fire & Explosion Investigations. The scientific method includes collection of data, analyzing the data and developing and testing of hypothesis from the empirical data collected.

Other publications used for reference: National Fire Protection Association 921, 2011 Edition; Ignition Handbook by Vytenis Babrauskas, Ph.D.; Kirks Fire Investigation by John DeHaan (sixth edition); Engineer's Report of the McKean Residence Fire, by Daryl L. Ebersole, P.E., CFEI; Statement Under Oath of Stephen McKean and Michele McKean, Fire Reports by Certified Fire Investigator Thomas Jones of HJH Investigations. ASTM 1188-1, Standard Practice for Collection & Preservation of Information and Physical Items by a Technical Investigator.

## **OVERVIEW OF EVENTS**

On or about September 22, 2011, a fire occurred at the home of Stephen & Michel McKean at 803 Raymondskill Road, Milford, Pennsylvania. The cause of the fire was investigated by the Pennsylvania State Police, Fire Marshal Trooper Russ Andress. The fire was reported to the Nationwide Insurance Company who assigned Claim Representative Marc Jackson. Fire Investigator Thomas Jones was hired by Nationwide to conduct an Origin & Cause Examination of the fire. A report dated October 10, 2011 was submitted to Nationwide Insurance by Fire Investigator Thomas Jones. On February 1, 2012, Investigator Jones returned to the scene with Ken Miller, owner of Ken Miller Electric to examine and remove a ceiling fixture box to which the fan/light was secured prior to the fire. In addition, he was to identify and remove the circuit breaker which controlled the fan/light. Subsequently, the McKean's filed to collect for their loss. A joint scene examination was conducted on November 2, 2012 when evidence previously secured was brought back to the scene. On December 10, 2012, a joint examination was conducted to perform destructive testing of the fan/light found in the area of origin.

## **Preliminary Remarks**

This investigator was not present during the original scene exam conducted by Fire Investigator Jones on September 24, 2011. After observing photos of his original exam, it is quite apparent several physical changes had been made at the fire scene between that time and the time of my original "walk through" on April 18, 2012. My opinions and conclusions are based upon the information provided by the insured, the fire report and photos provided by Fire Investigator Jones examination and photos taken by this firm during the joint exams of November 2, 2012 and December 10, 2012.

## **DESCRIPTION OF STRUCTURE**

The building is described as a custom designed two-story, wood frame of contemporary design erected over a partial basement. The main entrance for the purpose of this report at the front, which is considered to be the north elevation.(askew) Along the north elevation is a small porch which is covered by the second floor cantilever. There are two, two-story bump outs faced with cultured field stone on each side of the main entrance. At the east end of the structure is a one and a half car attached garage. At the west end of the structure there is a single-story extension and small bump out. At the rear of the structure there is a covered deck

together with a balcony on the second floor. At the east elevation is a fieldstone fireplace with a series of swing set and sliding glass doors. The deck wraps around to the south end of the structure with a set of sliding doors accessing the interior. Off of the southeast corner is an in-ground pool. There is also two swing set doors which access the interior. There is a passage door located at the rear of the garage.

## **EXTERIOR EXAMINATION**

The exterior examination begins at the front of the structure, which is considered to be the north elevation. At the front of the structure, I observed the two first floor windows of the bump out west of the main entrance to have been removed and covered with plywood. The window frame and sash were melted and partially consumed. (Photos 1 & 2) Evidence of smoke-stained glass was observed at the north elevation above the two bump outs and main entrance. At the west elevation, I also observed evidence of fire debris to have apparently been removed from the interior and placed on the deck.

## **INTERIOR EXAMINATION**

The interior examination begins at the main entrance which is located along the north elevation. Upon entering the structure, I observed large sections of the sheetrock above the entrance foyer to have been removed revealing evidence of recessed lights and radiant heat lines. Heavy black smoke and soot staining was observed on the first floor ceiling. To each side of the foyer was a semi-circular staircase leading to the second floor. Smoke and soot staining was observed on the side walls leading to the second floor together with soot staining on the second floor ceiling. To my left, or east, of the entrance foyer was the former kitchen. At the time of my initial "walk through", Stephen McKean pointed to a burn pattern in the oak floor where Investigator Jones identified a separate area of origin. The burn pattern was localized, indicative of a short lived fire, which was identified in Investigator Jones' photo log. The object in the photo, next to the partition, was apparently not secured for further scrutiny and was not entered into Investigator Jones' evidence log. The baseboard had received surface charring, with no evidence of any fire penetrating into the two-by-six partition. The interior partition was covered with ½" sheet rock. (Jones' Photo 41 Myers Photo 11). The kitchen cabinets had all been removed at this time. Much of the ceiling was removed revealing the presence of LVL trusses and recessed lighting. No evidence of fire origin was noted in the ceiling. Further examination of what appeared to be the dining room, which was located along the perimeter wall, revealed other furniture had been moved to this area for storage after the fire. However, there was no evidence of actual fire activity on any of the structural components.

The interior examination continued by proceeding between the two staircases opposite the entrance to what appeared to be a great room as evidenced by the large fireplace and additional furniture. No evidence of actual fire activity was observed in this room, although heavy black smoke and soot staining was noted throughout.

The interior examination continued by returning to the foyer and proceeding in a westerly direction. All of the interior walls and ceiling sheetrock had been removed. Further

examination of the windows along the bump out revealed the plastic framework of the double-hung windows had melted in place. Smoke and soot had penetrated through the upper portion of the window closet to the entrance.

The examination continued by proceeding into what the insured referred to as the living room. Examination of the living room revealed the entire floor ( $\frac{3}{4}$ " oak) had been removed with evidence of burn patterns penetrating through the sub floor of Oriented Strand Board. Actual charring and consumption of structural members was confined to the subfloor and LVL's and to the immediate area of the ceiling where the fixture box for the fan/light was located. The branch circuit serving the fan/light had been previously cut and removed by Ken Miller of Ken Miller Electric and witnessed by Fire Investigator Jones. The fan/light itself which was found directly below its' mounting and was also secured by Fire Investigator Thomas Jones. Further examination of the walls revealed most of the sheetrock had been removed prior to my examination. However, the sheetrock that was still in place revealed evidence of heavy black smoke and soot staining. There was soot staining displayed on the LVL's in the area immediately above where the fan was located.

The examination continued by passing through the living room to the north end of the living room to where the insured has resided. This room failed to reveal any physical evidence of fire activity.

The interior examination continued by going into the basement via the stairs along the west interior wall of the living room. Examination of the basement revealed it to be approximately six feet in height. Upon reaching the bottom of the stairs, I observed several lengths of Kraft faced fiberglass insulation strewn about the basement. Proceeding in an easterly direction, I observed several joist bays where fire had penetrated from above leaving several holes. A closer examination of the joist bays revealed the presence of plastic radiant heating lines. There was no evidence of electrical malfunction or short circuiting consistent with fire origin and the direction of fire travel clearly from above.

## **UTILITIES**

### **Electric**

Incoming service is via underground and was routed to the electric meter pan located along the perimeter wall just west of the main entrance. Incoming service was the routed to the main distribution panel located at the northwest corner of the basement. Examination of the panel revealed it to be manufactured by Cutler Hammer with a 200 AMP main breaker. There are a total of forty circuits. Some circuits were tied together and one was blank which apparently was the breaker removed by the electrician during the initial scene examination conducted by Nationwide. There was also a sub panel located immediately below. There are six breakers on each side, some were tied together. No evidence of failure was noted at the sub panel. According to an inspection conducted by Ken Miller of Ken Miller Electric, the 20 amp breaker controlling the fan/light circuit had tripped and an arc was found on the buss bar.

## **Heat**

Heat was provided to the structure via a radiant heating system in conjunction with an oil-fired boiler further identified as manufacturer: Burnham with a Beckett oil burner and Honeywell controls. There was no evidence of mechanical malfunction or failure noted at the boiler.

## **Alarm System**

Located in the basement was an alarm panel further identified as Victor Security. There is a battery with the nomenclature 2-03 and is further identified as Household, Fire, and Burglary warning system control unit, Issue #AE6746, Model #60-734-01. There was no central station monitoring.

## **REPORT FILED BY FIRE INVESTIGATOR THOMAS JONES ON OCTOBER 10, 2011**

On October 10, 2011, an Origin and Cause Report was filed by Fire Investigator Thomas Jones as a result of a scene examination conducted on September 24, 2011 at the McKean's residence at 803 Raymondskill Road, Milford, Pa.

The results of his investigation revealed there was no evidence of forcible entry. In conclusion, based upon a reasonable degree of fire investigative certainty, it was his opinion that this fire was Arson and incendiary in nature. There were 5 distinct and separate points of origin. There was no communication between the 5 points of origin found. Those points of origin were identified as:

1. On the middle couch the ceiling fan/light had fallen. The fan was examined and there was no sign of any malfunction or unusual electrical activity. In the living room there is a point of origin on the front couch, the middle couch and a chair along the rear. (Total of 3).
2. On the kitchen floor along the north wall there is an origin on the floor.
3. In the kitchen on the table there were papers on the table that were set on fire.

Photos which best represents these areas from Investigator Jones photo log are: 17, 30 - 41.

## **Response to findings:**

1. Investigator Jones did not find any evidence of malfunction or electrical activity on the fan/light. He was premature to eliminate the fan/light because it had not been thoroughly examined until a joint examination was conducted on December 10, 2012. (More than a year later).

Ken Miller of Ken Miller Electric was also brought in on February 1, 2012 to examine the fan/light and removed the fixture box and section of hardwire. He also found no evidence of electrical activity on the fan/ light during his examination. He went on to remove the Cutler-

Hammer breaker which was tripped. At the end of his Supplemental Report, Investigator Jones concluded that "This examination of the plastic junction box, ceiling joist and breaker would eliminate the ceiling light/fan as an ignition source for this fire event. The heat generated on the origin couch caused the junction box to melt and allow the fan to fall on the couch below."

**Conclusion:** Since there was no evidence of electrical activity on the house wiring or stranded wire of the fan/light, but there was evidence of electrical activity found later on the windings of the motor, suggest there was an electrical malfunction of the fan/light while it was on and there was current to the fan motor at the time of the fire and cannot be ruled out as a possible cause of the fire. One could not eliminate the fan as an ignition source without a thorough examination of the motor windings.

He also stated that the 3 fires were separate and uncommunicative.

If one looks at the chair in ( Myers Photos 7-10) which were taken on the day of the joint scene examination, one can see the chair wing with burn patterns on the side facing the sofa. These patterns are clearly from "radiant" heat. A close look at the seat also reveals the most intense burning is on the side toward the sofa. There is little or no damage on the opposite side. This investigator further opines the direction of fire travel is **from** the center couch. Had a separate fire originated on the seat cushion the damage would be equal across the surface of the seat.

The center couch (or sofa) has received the greatest amount of damage.

Examination of the couch furthest north reveals the wood framework closest to the center couch is totally consumed as compared to the opposite end. Again, the direction of fire travel being **from** the center couch.

**This being consistent with one origin: the center couch, below the fan/light.**

The following section of the Ignition Handbook by Vytenis Babrauskas, Ph.D. addresses the subject of radiant heat as it applies to "Upholstered furniture and mattresses" Page 934 (Bottom of first column)....But it is not necessary for a room to reach flashover before significant flaming and high heat fluxes can be found in localized places. Thus upholstered furniture may well ignite from radiant heating occurring prior to flashover. In addition, NIST (National Institute of Standards and Technology) and CBUF (Combustion Behavior of Upholstered Furniture) testing indicate that, if one arm of an upholstered chair or sofa is flaming, the other arm commonly ignites from radiant heating not by surface flame spread.

#### **Peak Heat Release Rates (Unconfined Burning) Table 5.6.3.1 NFPA 921**

In order for one to understand the relative heat release rates of the polyurethane cushions and trim used in upholstered furniture the following statistics were taken from the above listed table of NFPA 921:

**Fuel**

**Peak HRR Kilowatts (Heat release rates)**



Polyurethane easy chair	1350 – 1990
Polyurethane sofa	3120
Christmas trees, dry	3000 – 5000
Gasoline / kerosene (19kg)	400

Conclusion: The radiant heat the sofa is capable of producing is nearly as much as a Christmas tree.

**The ignition source for the one sofa and chair most likely come from one source; the sofa below the fan/light, and are the results of radiant heat and cannot be ruled out as such.**

**Origin 4:** In the kitchen along the north wall on the floor. (Jones photo 41)

There is a question of whether or not this object was in this area pre fire. If one looks closely at this photo he will see “drags” marks or a thin trail from the direction of the entrance. In addition, there is a “brush” mark on the miter of the baseboard, which may have occurred when the object passed. There is evidence of a short lived fire with burn patterns on the floor with little or no extension to the sheetrock wall. This object was burned around the entire perimeter including a burn pattern on the floor. It also appears to have been projected into the kitchen.

There was no mention in Investigator Jones report as to what this object may have been. (Myers photo 11) Reveals a red color in the area of the burn in the floor. (Jones photo 41)

**Once this area was photographed this evidence should have been collected and preserved.**

### **ASTM 1188-11 Standard Practice for Collection and Preservation of Information and Physical Items by a Technical Investigator.**

#### **1. Scope**

1.1 This practice covers guidelines for the collection and preservation of information and physical items by a technical investigator pertaining to an incident that can be reasonably expected to be the subject of litigation.

#### **2. Significance and Use**

2.1 This practice.....

The intent is to obtain sufficient information and physical items to discover evidence associated with the incident and preserve it for analysis.

#### **3. Procedure**

### 3.2 *Physical evidence*

3.2.1 Plan the investigation to protect physical evidence significant to the incident. The plan should consider the possibility of identity loss, physical loss or the deterioration or destruction of information due to environmental effects or the recovery and collection activities. For each item considered to be significant to the incident, document, collect and preserve physical items and their information content as soon as possible.

## NFPA 921 Chapter 16 Physical Evidence

**16.1\* General.** During the course of any fire investigation, the fire investigator is likely to be responsible for locating, collecting identifying, storing, examining, and arranging for testing of physical evidence. The fire investigator should be thoroughly familiar with the recommended and accepted methods of processing such physical evidence.

### 16.2 Physical Evidence

**16.2.1** Physical evidence, defined generally, is any physical evidence or tangible item that tends to prove or disprove a particular fact or issue. Physical evidence at the fire scene may be relevant to issues of the origin, cause, spread or the responsibility for the fire.

This object, considered by Investigator Jones to be a “point of origin”, and identified as #41 in Investigator Jones photo log, should have been collected and preserved. **This is clearly spoliation of evidence. Without this evidence, the insured is compromised to prove otherwise.**

**Origin 5:** In the kitchen on the table papers were set on fire.

It seems unlikely that someone who seriously wants to burn a house down, would set fire to a couple of papers on a noncombustible surface. Especially when there is a woven wood basket nearby that could provide a more significant fuel package. (Jones photo #41).

On page 132, Stephen McKean states the windows to the right of the entrance broke out and then he saw flames. Obviously, there had to be pressure building up on the interior as the fire was starving for air (oxygen) from the smoldering fire. Once the window failed, air was introduced into the fire compartment, causing a more rapid fire growth. This rapid fire growth causes the sudden expansion of air creating convection currents inside the fire compartment. **This cannot be ruled out as a reason why Origin 4 and five appear to be separate points of origin.**

## EVIDENCE OF ARCING ON THE WINDINGS OF THE FAN/LIGHT

On December 10, 2012, a joint examination of the fan/light found in the area of origin, was conducted with Fire Investigator Thomas Jones; Sidney Rubin, P.E., CFEl; Daryl L. Ebersole, P.E., Joseph E. Myers Jr.; Joseph E. Myers Sr.; and an attorney for the plaintiff. This

examination was destructive in nature. Clarification of possible spoliation issues were discussed prior to the disassembly of the fan/light. After discussing this matter, it was the consensus of opinion that the examination should move forward. At the conclusion of this examination, it was determined by Daryl Ebersole, P.E. that there was clearly evidence of electrical activity on the windings of the fan motor and could not be ruled out as a possible cause of the fire.

On Page 407 of Kirk's Fire Investigation, Figure 10.26B, is a photo of a failure in the windings of a motor, which compared to the photo on Page 22 of Mr. Ebersole report are very similar.

**Conclusion:** After conducting a thorough and systematic examination of the fire scene, reviewing photos of Fire Investigator Thomas Jones, together with participating in the destructive examination of the fan/light and findings of Daryl Ebersole P.E., it is the opinion of this investigator that this fire originated on the center sofa below the fan/light. According to Daryl Ebersole P.E., electrical activity was found on windings of the fan/light and no other physical evidence of arcing was found on the house wiring or on the fan/light which could be attributed to attack by fire. The fan/light cannot be ruled out as a possible ignition source which caused the fire. In addition, the effects of radiant heat cannot be ruled out as the cause of fire spread to the other couch and chair in the living room. It is the opinion of this investigator, that the cause of this fire is "undetermined".

Respectfully submitted,

Joseph E. Myers, Sr., CFI, CFEI, CFII